

Civil Defense

Proper Handling of Mass Casualties During a Major Disaster

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CARE OF THE WOUNDED is a very important phase of Civil Defense. In connection with the proper planning and preparation for the treatment of mass casualties during a major disaster we must consider the problems which will obtain under the worst possible conditions—that is, enemy attack with thermonuclear weapons. This will present the new problems of the radiation syndrome and residual radioactivity in the areas about the site of the target. The number of dead and injured, in a heavily populated region, will be in the hundreds of thousands. If we can cope with this emergency, problems presented by disasters of other types will be of a relatively simple nature.

There will be a great shortage of trained personnel, supplies and facilities necessary for the proper care of this huge number of casualties. Consequently the medical and health services will utilize all physicians, dentists, veterinarians, nurses and technical health personnel available. Conditions under which treatment is given will of necessity be primitive. It should be realized that the specific treatments of various types of casualties will depend upon the supplies and equipment available in the civil defense medical units and first aid stations. These supplies and equipment may not permit a physician to treat patients as he is accustomed to do in his regular practice. Uniform minimum procedures must be followed. Speed in treatment is essential. The use of supplies must be kept to a minimum.

Before medical and health personnel mobilize or enter the damaged area following an atomic or thermonuclear explosion, clearance must be obtained from Radef.* This may be given within the matter of minutes or perhaps not for days. A time lapse of the latter magnitude will result in the death of a large number of wounded from causes which would have been remedial if seen early.

The specific function of first aid stations includes receiving, sorting and classifying casualties according to the nature and severity of the injuries; decontaminating casualties; administering first aid and giving initial professional care; preparing, maintaining and transmitting casualty records and reports; routing of casualties; maintaining medical and surgical supply support of all first aid system

groups; and later serving as outpatient stations for continuing or following care of sick and injured people.

The casualties should be sorted immediately upon arrival at the first aid station. The physicians at the station should:

- (a) Quickly sort casualties into the following three groups:
 1. Hopelessly injured
 2. Seriously injured
 3. Injured
- (b) Start emergency treatment for seriously injured first
- (c) Supervise treatment generally
- (d) Direct disposition of doubtful cases

The physician's judgment in the disposition of casualties should be influenced by the general condition of each casualty, need for immediate resuscitation, extent and type of injuries, time required for emergency care, possibility of delayed treatment, presence of chemical or radiological contamination, and other factors. Many ambulatory casualties will have only slight injuries and should not be permitted to interfere with the care and prompt movement to hospitals of seriously injured casualties. The following priority schedule, or a similar one, should be established to control the flow of casualties into and out of a first aid station and for transportation to hospitals:

(a) Immediate life saving and rapid first aid care initiated at first aid stations and continued at hospitals, such as resuscitation and treatment of the following: severe hemorrhage, severe penetrating and crushing injuries of the chest and abdomen, and badly crushed and torn extremities.

(b) Immediate resuscitation, then rest, where no surgical operation or other care is required to save life within a few hours, including treatment for shock, small chest penetration, and the need for artificial respiration or administration of oxygen.

(c) Delayed definitive treatment initiated at stations and continued at hospitals for severe burns, compound fractures, joint penetrations and severe face or superficial wounds.

(d) First aid, if needed, with transportation to hospital for specialized treatment, for minor head

*Radiological Defense Service.

injuries, eye and ear injuries, vascular injuries and miscarriages.

(e) Delayed first aid and release to home or work, for contusions, lacerations, sprains, simple fractures and minor burns.

Radiation casualties without injuries such as those listed above should be evacuated to designated hospitals or outpatient services after decontamination. Radiation casualties with injuries falling into the above categories should be decontaminated and handled according to established priority. Casualties with chemical or biological contamination, with or without injuries, should be handled according to the priority established for injuries after being decontaminated and/or isolated. Where feasible, persons should be monitored before they enter the first aid station and, if found seriously contaminated, exposed body surfaces should be washed and clothing discarded.

Before instituting treatment of wounds a rapid thorough examination and questioning of the casualty, if possible, is important for the recognition of multiple injuries. It is easy to overlook injuries in the seriously wounded unless the clothing is removed. This knowledge of multiple injuries makes possible the differentiation between those requiring primary and secondary consideration.

Emergency treatment of casualties in any disaster is begun in the field by the rescue workers at the scene of injury. Treatment is limited to resuscitation and first aid measures. If narcotics or large doses of sedatives are given to "walking wounded" who are expected to make their own way out of the disaster area, the majority of them will be converted to litter cases. Most emergency treatment will be carried out in the first aid station. This will consist of providing adequate airway; controlling hemorrhage; relieving pain and treatment of shock with plasma, plasma volume expanders or electrolyte solutions; closing sucking chest wounds; applying splints and dressings; administering tetanus prophylaxis; and starting chemotherapy. Casualties will then be evacuated to nearby existing or improvised hospitals for continued resuscitation and surgical treatment.

SHOCK

Shock can be expected after any severe injury. Except after massive hemorrhage, the fully developed picture of peripheral circulatory collapse associated with a fall in circulatory blood volume may not appear for several hours. Consequently the factor of time is of paramount importance in treatment of shock. The longer shock persists, the greater is the danger to the vital organs from anoxia and the more difficult it is to reverse the process and insure recovery. Shock may be recognized by: cool

moist skin, pale and cyanotic lips, progressive weakening of pulse, falling blood pressure, thirst and restlessness, collapsed peripheral veins, and depression of urine formation. The majority of cases of shock are the result of hemorrhage, burns, trauma or dehydration and are characterized by reduction of blood volume. The rapid restoration of blood volume is the main goal of therapy in such cases.

The steps to be taken in the treatment of wound shock are as follows:

Stop hemorrhage. External bleeding can usually be controlled by pressure bandage or by maintaining constant pressure. Tourniquet is rarely needed. If used, apply just above the site of the hemorrhage and release after 45 minutes and reapply only if bleeding recurs. Tag and print T on the forehead. Clamp and ligate bleeding vessels whenever feasible.

Maintain adequate airway. Tracheotomy should be performed whenever there is doubt as to the adequacy of respiratory exchange and especially in the case of casualties with severe head injuries.

Elevate foot of bed or stretcher 12 inches. This may be contraindicated in head injuries, pulmonary edema or chest wounds if severe respiratory distress is present.

Conserve body warmth. Apply blankets above and beneath the patient except in very hot environment.

Relieve pain and anxiety.

Restore blood volume. This is the most important step in the treatment of shock, and whole blood is best suited for this purpose. When whole blood is not available plasma and plasma volume expanders such as gelatin, dextran and polyvinylpyrrolidone (PVP) may be used to sustain an adequate, but not necessarily normal, blood volume and blood pressure. When plasma and plasma volume expanders are given after massive hemorrhage, anemia will persist and will necessitate transfusion as soon as blood is available. Intravenous infusion of saline solution is even less effective than plasma and plasma expanders in restoring blood volume, for it does not replace the water-holding power of lost plasma protein. However, it may be the only fluid available and may sustain circulation up to an hour while blood, plasma or plasma substitutes are obtained.

WOUNDS IN GENERAL

There are two kinds of wounds—open and closed. The open wound is visible. The closed wound, for example a ruptured spleen, liver or intestine, may be easily missed and more immediately fatal. None of the open wounds are clean wounds. Due to the inevitable time lag between occurrence and treatment in a major disaster, all these wounds must be considered as infected and treated as infected. The type of

wound influences the method of treatment. *Abrasions* for the most part will not be treated due to lack of personnel, facilities and supplies and because of more important types of wounds requiring care. With *incised wounds* there is usually little or no damage to surrounding tissue. They should be washed with soap and water and a dressing applied. Primary suture should be performed only on wounds of the face or scalp. *Contused and lacerated wounds* require excision of damaged tissue in addition to removal of contaminants by gently washing with soap and water and irrigation with saline solution. *Penetrating wounds* present the problem of foreign bodies, in addition to contamination and damaged tissue, creating a still further demand for excision. In *perforating wounds* of an extremity it is usually advisable to excise the skin and subcutaneous fat at each opening and not to excise the remainder of the tract and muscle unless pronounced hemorrhage is present. The tract may be washed through with normal saline solution if this is possible without exerting pressure. *Avulsed wounds* present a grave problem because frequently the flap dies unless treated as a graft. The procedure is to cut away all fat from the free skin flap and remove the normal exposed fat down to the deep fascia and resuture the skin in place as a full thickness graft.

Debridement or, better, *excision of the wound* means enlargement of the wound so that all tracts are laid open, sharp excision of all devitalized tissue, removal of all foreign bodies and hemostasis; the whole being accomplished with gentleness under constant irrigation with normal saline solution. The excision of the wound requires time, effort and extreme carefulness. Anesthesia is necessary. The wound should be packed with gauze and the surrounding skin cleaned up to the margin without further contamination of the wound. The skin is shaved and scrubbed with soap and water; grease is removed with benzine or ether. The pack is removed from the wound and any evident small foreign bodies are taken out. The wound surface is then scrubbed thoroughly, generally with soap and water with a free irrigation with normal saline solution. Excision is then commenced and an attempt is made to keep the excised area in one piece. Preserving healthy skin is important. All devitalized muscle is cut away, tendons or nerves are washed if necessary but not sacrificed, and soiled periosteum is cut away. Portions of bone which have dirt ground into them are cut away sharply. Bone fragments which have the slightest attachment to soft parts should be left in unless they are too badly contaminated.

All hematomas encountered must be evacuated. Contaminated blood clots and hematomas are com-

parable to masses of devitalized tissue as far as obtaining the desired result from excision is concerned. They constitute an excellent culture medium. Whenever bleeding does not stop readily and completely with the use of pressure by warm gauze compress, the vessels should be ligated with fine suture material.

The wounds are left wide open and packed. This does not mean stuffing in large amounts of gauze under pressure as for uncontrollable hemorrhage. Rather, one or a few layers of fine mesh dry gauze are laid between the raw edges of the tissue, particularly separating any deep crevices. The idea is that there shall be no spaces shut off so that fluid and blood may collect as a medium for the growth of bacteria. Leaving any dead space in either sutured and unsutured wounds is to be avoided. The wounds may then be closed after five to ten days, when there is no evidence of infection, in a hospital. Following dressing of the wound, a smooth compression bandage is applied. This will help prevent edema and formation of dead spaces. Immobilization is of great value in injuries of soft parts as well as in fractures of bone. Healing is more rapid and timely and the patient more comfortable. Scar tissue is less and it is a prophylaxis against infection. In minor wounds, adhesive plaster and bandages are sufficient. In extensive muscle damage or bony injury it is of primary importance to have as complete soft part immobilization as can be obtained, that is, by plaster of paris splints or traction. Otherwise, each movement of the part is liable to mobilize or spread infection.

Some patients will be brought in with badly infected wounds. The wounds should be inspected, adequate drainage provided and antibiotics started at once. If true gas gangrene is present (clostridial myositis), the treatment will vary with the stage of the infection and the supplies available.

HEAD INJURIES

If the casualty presents a compound fracture with or without depression and with evidence of underlying brain injury as indicated by progressive loss of consciousness and lateralizing neurological signs, operation becomes mandatory. However, this cannot be performed until full neurosurgical facilities are available. It will be the responsibility of those in the first aid station to:

1. Maintain circulation by treating for shock.
2. Provide an adequate airway. Perform tracheotomy if necessary.
3. Control temperature if above 102° F. This may be done by removing clothing, applying wet packs and/or giving aspirin per rectum.

4. Maintain adequate fluid balance.
5. Transfer to a hospital as soon as possible.

EYE INJURIES

Eyes may be irrigated with water for chemical burns. For lacerations of the eyeball, penetrating wounds due to foreign bodies, etc., sterile dressings should be applied to both eyes and the patient evacuated to a hospital.

CHEST INJURIES

Injuries to the chest may be classified as rib fracture, crushed chest, penetrating and perforating wounds.

Rib fracture may be single or multiple. Usually the fourth to tenth ribs are involved. In treatment of mass casualties, strapping will probably be the only method possible in the early stages. However, this is unphysiologic because it reduces respiratory movement. Narcotics may also be given, but doing so reduces the cough reflex. Wherever possible, the treatment of choice would probably be intercostal nerve blocks which usually consist of the injection of 3 cc. to 5 cc. of 1 per cent local anesthetic agent at the angle of the rib, and injection for each rib fractured.

Pneumothorax requires watchful management, especially if one does not employ some method of constant removal of air. If closed, pneumothorax is usually due to a laceration of the lung or to bronchopleural fistula. The air may be removed by needle for diagnostic purposes, especially in doubtful cases, and especially if the patient is having respiratory distress. This nearly always gives the patient relief. If the improvement is only temporary, an intercostal catheter should be inserted in the sixth or seventh interspace in the posterior axillary line and attached to a water seal drainage bottle or, if that is not available, to the finger of a rubber glove after removal of the tip in such a way as to form a flutter valve. The lung must be expanded as soon as possible in these conditions because if expansion is delayed complications occur. If open pneumothorax, or sucking wound, is present, one should occlude the wound with a large firm dressing and then insert a thoracotomy tube and connect it with a water seal drainage bottle or flutter valve. Definitive treatment to the wound should be given only after the patient's condition improves. Crush injuries of the chest are those in which the wall is "staved in" so that it loses its rigidity and becomes a "flail" chest. This usually occurs from compression injuries of the thorax where adjacent multiple ribs are fractured, at least in two places, especially anteriorly, and the sternum loses its mooring. Paradoxical res-

pirations occur along with pain. Intercostal nerve block relieves the pain and makes the respirations easier. Rib immobilization by means of traction, using towel clips clamped about the rib ends and connected to an overhead frame with enough weight (about three to five pounds) to stabilize the chest, will improve respirations.

Penetrating and perforating wounds of the chest. In treating these wounds, one must first combat shock, then stop hemorrhage and, thirdly, tamponade sucking wounds. Clean wounds may be closed; ragged wounds should be debrided. If shock should continue in spite of good treatment, one should look for progressive bleeding in the chest, tension pneumothorax, obstructed airway, great vessel injury or cardiac tamponade. Early thoracentesis is important for the diagnosis and treatment. If there is significant amount of air or blood obtained by aspiration, then under-water tube drainage should be instituted. This is a good guide as to whether or not the bleeding is continuing and also gives an accurate estimate of the amount of blood lost. Most often the bleeding that occurs is from the intercostal or internal mammary arteries. It may require ligation. Obstruction of the airways may be prevented by placing the unconscious patient on his side or by lowering the head of the table. If obstruction is suspected, tracheotomy should be performed. Great vessel injury is more likely to result from wounds above the clavicle or sternum, and injury of this kind necessitates early operation.

Cardiac tamponade can cause shock. In the diagnoses of cardiac tamponade, one should consider the position of the wound of entrance, neck vein distention and muffled cardiac sounds. Immediate pericardial aspiration is required and if blood is obtained, the diagnosis is confirmed. Aspiration may be performed from below upward at the angle between the costal cartilage and the xyphoid process or directly through the fourth or fifth intercostal spaces just to the left of the sternum. If there is general improvement after aspiration, the patient can be treated conservatively and observed closely. If shock is unchanged after a successful tap, or if improvement is only temporary, then surgical intervention with repair of the wound is indicated.

The semi-sitting position is tolerated best by patients with chest injuries. Morphine should be used in small doses. Oxygen, if available, is urgently indicated where circulatory collapse is present.

ABDOMINAL INJURIES

Injuries of the abdomen if open or penetrating should be treated by applying a simple massive sterile dressing. No attempt should be made to re-

place viscera, remove foreign bodies or manipulate or explore the wound. Treatment for shock should be given, a nasogastric tube should be inserted, if available, and chemotherapy started. Casualties with nonpenetrating wounds of the abdomen should be treated for shock and given nothing by mouth. Patients with abdominal injuries have high priority for evacuation to a hospital.

FRACTURES

A casualty with a fracture may present respiratory embarrassment, hemorrhage and shock. These complications of wounds demand first attention. One should depend on pain, loss of function or deformity for the emergency diagnosis of fracture and should not try to obtain crepitus or false point of motion. If fracture is suspected, the casualty should be treated as if the diagnosis of fracture had been confirmed.

Immobilization is the basic requirement in the treatment of a fracture. Casualties with fractures of the skull should be transported lying on the abdomen, with the face turned to the side to prevent aspiration of vomitus or blood. If the fracture is in the jaw, attention must be given to maintaining an adequate airway. Temporary immobilization can be accomplished with a circular bandage passed beneath the jaw to the top of the head, and held in place by another bandage from the forehead to the occiput. The teeth should not be held tightly together by the bandage if there is any reason to anticipate vomiting.

Meticulous precautions must be observed in moving a person suspected of having spinal injury, and additional care is imperative to stabilize an injured cervical spine. The neck must not be bent. The head must be maintained in a neutral position. This is best managed by having someone place his hands on either side of the casualty's head with his fingers supporting below the occiput and under the mandible and exerting slight but gentle traction. A board or stretcher is slid under the patient and the head, face up, is braced to prevent side to side motion. Casualties with fractures of the dorsal and lumbar spine are transported with the back up, on a board, with the head turned to the side. If there is the possibility of a broken neck, the patient should be transported as though fracture of the cervical spine were a certainty. If fracture of the spine is suspected, the motor and sensory status of the lower extremities should be noted. Casualties having progressive paraplegia should be evacuated immediately to a hospital for definitive surgical therapy.

The application of a sling with the elbow at a right angle and the binding of the upper arm to the

body with a circular bandage will immobilize fractures of the shoulder, arm and elbow. Pieces of wood, metal, newspapers or cardboard may be utilized to splint fractures of the forearm, wrist and hand, which are then placed in a sling with the elbow at a right angle. In treatment of fractures of the lower extremity, traction with a Thomas-type splint is best and should be used for all fractures from pelvis through ankle. However, an adequate supply of these splints will not be available and the materials at hand will have to be used. A long wooden board placed laterally from the axilla to beyond the foot with another board from the buttock to the heel will keep the fractured extremity at rest. In cases where speed is essential and no material for a splint is immediately available, the two extremities may be bound together. If traction is applied, it should be sufficient to immobilize the fracture but not enough to reduce it. Care must be taken in the application of ankle or instep hitches to prevent pressure necrosis. They should be applied over shoes when possible.

A person with a fractured pelvis should be placed and kept on a rigid support, lying on his back. If the injury is severe, the thighs and legs should be bound together. The color of the urine should be noted, a specimen withdrawn by catheter if necessary. If the urine is bloody a catheter should be strapped in place as a drain.

Compound or open fractures should be treated as closed fractures except that the wound or protruding bone should be covered with a sterile dressing. A note should be made on the casualty's medical tag that the bone protrudes through the skin, since it may be pulled in by traction.

CRUSH INJURIES

Casualties with crush injuries should be treated for shock, given nothing by mouth, and given high priority for evacuation to a hospital.

BURNS

A large percentage of the casualties from explosion of fissionable materials will have sustained burns. These will be flash burns due to the explosion of the bomb and also deep and extensive flame burns of individuals trapped in debris during the ensuing fires. Burns occurring in such circumstances will often be associated with lacerations, crush injuries, or fractures which are sometimes more serious than the burn. Radiation sickness will also complicate the management of many patients.

At the first aid station a rapid thorough examination of each burned patient should be made and in-

formation recorded as to the extent and severity of the burn. Too much time should not be spent initially trying to determine the exact degree of the burn, except where necessary to decide whether there is a chance for recovery. The presence of respiratory tract burns, and the location, extent and degree of surface burns should be recorded on the casualty's emergency medical tag with a quick sketch of the burned area. Associated injuries should be carefully assessed and noted. The agent causing the burn (fire, flash, steam, chemical, electricity, etc.), if known, should also be recorded.

In order to best utilize the available resources, burn cases must be sorted according to severity and the care required. These casualties may be grouped as follows:

- (a) Hopelessly burned casualties.
- (b) Casualties with severe burns who may be saved by vigorous therapy.
- (c) Casualties with moderately severe burns not immediately threatening life but requiring hospitalization.
- (d) Casualties with minor burns suitable for ambulatory treatment.
- (e) Casualties requiring only self-care.

The group considered as hopelessly burned includes all individuals with third degree burns exceeding 80 per cent of the body surface, and elderly individuals (over 70 years) with deep burns of more than 50 per cent of the body surface. Before consigning a patient to this group, the doctor must assure himself of the depth and extent of the burn and, if possible, obtain the opinion of another physician. Hopelessly burned casualties should be made as comfortable as possible and removed to areas where they will not interfere with the care of casualties who can be saved.

Casualties who can be saved by vigorous therapy are those with second degree burns involving 20 to 70 per cent of the body surface, and varying amounts of third degree burn. These casualties have first priority for transportation to hospitals.

Casualties in no immediate danger, but requiring hospitalization, are those with moderately severe second degree burns involving 10 to 20 per cent of the body surface, small areas of third degree, or third degree burns of the hands.

Casualties for ambulatory treatment in first aid stations are those with superficial burns affecting less than 10 per cent of the body surface.

Casualties requiring only self-care are those with just first degree burns and small areas (less than 5 per cent) of second degree burns. They should be instructed to treat themselves.

The successful treatment of burn casualties demands immediate initiation of an orderly pattern of management and close attention. A patent airway must be assured immediately. Tracheotomy is essential when laryngotracheal edema develops from inhalation of flame. Shock develops in from four to 24 hours after a burn due to reduction of blood volume resulting from loss of plasma-like fluid at the site of the burn. Sodium, protein and erythrocytes are lost and intense hemoconcentration follows. Blood volume must be restored. Formulas have been devised for fluid replacement. Simple rules based on severity and extent of the burn modified by the patient's clinical response are in order. This is indicated by thirst, pulse rate, blood pressure and urinary output.

For surface burns of less than 15 per cent, in the absence of vomiting and shock, oral treatment with hypotonic saline solution may be satisfactory. This solution contains a level teaspoon of salt and half a level teaspoon of bicarbonate of soda to a quart of water. This should be started gradually and increased to about one glass per hour. Intravenous fluid therapy with any available preparation should be started immediately in those patients with severe burns. Plasma, plasma volume expander, dextrose in saline, saline, or dextrose in water may be used, in that order of preference. The fluids received should be correctly recorded. The amount of fluid given in a 24-hour period should not exceed 10 per cent of the body weight.

No single routine is applicable to all burns. Choice of a method of local therapy depends upon the availability of medical supplies and personnel; the location of the burn; the presence and extent of complicating injuries, such as fractures, avulsions, lacerations, crush, etc.; the necessity for transportation; and environmental conditions. Local therapy of other severe injuries, such as major lacerations, penetrating wounds, compound fractures, injuries to large blood vessels, etc., should take precedence over burns in the initial phase. Shock always demands emergency treatment. Local debridement is minimal, consisting of the gentle removal of gross dirt. If no dressings are available, clothing should not be removed unless removal is necessary for decontamination. Burns associated with other injuries are covered with the standard burn pad (compress and bandage, gauze, field 22" x 18", 22" x 35") prior to evacuation for definitive care. Location of the wound should be noted on the casualty's emergency medical tag. All burn casualties requiring transportation should be protected with a sterile covering. Second degree burns of less than 10 per cent of the body surface with no contained areas of

third degree burn are dressed with a simple sterile covering or standard burn pad. The casualty is referred to a first aid station or hospital outpatient clinic for ambulatory follow-up care. No topical medication should be applied to burns. All severe burns of the hands should be dressed with the standard burn pad. Hands should be properly splinted in the position of function and kept elevated during evacuation.

Routine tetanus prophylaxis should be given promptly to all casualties with second and third degree burns, and particularly to those with complicating open wounds. While prophylactic chemotherapy is desirable, inadequate supplies of antibiotics will make it imperative to reserve them primarily for treatment of casualties with serious established infections and, secondarily, for the prevention of infection in the more severe burns.

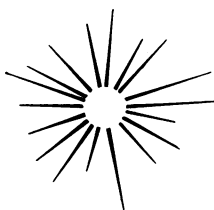
It must be emphasized that priority for treatment and transportation will depend largely on the judgment of the physician in charge. No hard and fast rule is set up but, in general, the following order is recommended: massive hemorrhage; chest wounds, when there are serious signs of clinical shock and anoxia; shock; abdominal wounds; burns and crush injuries; and head and spine injuries.

This discussion of the handling of mass casualties during a major disaster may seem very elementary to some, but it must be remembered that *all* physicians will have to participate in the care of these casualties regardless of specialty. In case of attack by thermonuclear weapons, facilities will not be available or organization set up so that each may practice his specialty. First aid may be the only contribution physicians can make for many days after such an attack. On considering the number of casualties, the lack of trained personnel, the lack of facilities and the lack of supplies, one wonders whether it would not be better to treat the less seriously injured first instead of the more seriously injured, in order to get them back to work as soon as possible. This thought is contrary to the ethics of the medical profession but where national survival is at stake should be considered.

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REFERENCES

1. Manual for the Emergency Field Treatment of Casualties. State of California, Office of Civil Defense, Nov. 1952.
2. Emergency Medical Treatment. Federal Civil Defense Administration (Technical Manual), United States Government Printing Office, April 1953.



WITH WARNING

IMMEDIATELY REPORT TO
YOUR CIVIL DEFENSE
ASSIGNMENT

IF THIS IS NOT POSSIBLE,
REPORT TO THE NEAREST
MEDICAL INSTALLATION

WITHOUT WARNING

TAKE IMMEDIATELY AVAILABLE
COVER. DO NOT LOOK AT THE
BRILLIANT FLASH. IF IN CAR
AND NO SHELTER AVAILABLE,
STOP AT CURB, CLOSE ALL
WINDOWS, TURN CAR RADIO ON,
LIE ON FLOOR OF CAR.

AS SOON AS POSSIBLE CARRY
OUT CIVIL DEFENSE ASSIGN-
MENT.



M. D.

WHAT TO DO ?

KNOW YOUR C.D. ASSIGNMENT. LEARN ALL ABOUT CD.